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OF THE

DEPARTMENT OF AGRICULTURE

OF

PORTO RICO

REPORT OF HEARING HELD BY THE FEDERAL HORTICULTURAL BOARD TO CONSIDER THE ADVISABILITY OF RESTRICTING OR PROHIBITING THE ENTRY FROM PORTO RICO OF FRUITS AND VEGETABLES INTO THE UNITED STATES

PUBLISHED BY

THE INSULAR EXPERIMENT STATION

RÍO PIEDRAS, P. R.

(ISSUED AUGUST 1925)

SAN JUAN, P. R.
BUREAU OF SUPPLIES, PRINTING, AND TRANSPORTATION
1925

NOTICE

Due to the resignation of certain of the technical personnel at the Insular Experiment Station, investigations under way, the publication of which was assigned to Vol. VIII, No. 1 of the Journal, were suddenly suspended to be continued later.

We are now issuing the report of the Hearing before the Federal Horticultural Board, as Vol. VIII No. 1 of the Journal, which completes our series for 1924.

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[1] As of date of issue, August, 1925.

Some members of the Porto Rican delegation who attended the hearing (from left to right): Mr. D. W. May, Hon. Félix Córdova Dávila, Mr. H. H. Scoville, Mr. Carlos E. Chardón, Sr. José R. Aponte, Mr. G. H. Wildman, Sr. Enrique Landrón

REPORT OF

PUBLIC HEARING TO CONSIDER THE ADVISABILITY OF RESTRICTING OR PROHIBITING THE ENTRY FROM PORTO RICO OF FRUITS AND VEGETABLES IN THE RAW OR UNMANUFACTURED STATE ON ACCOUNT OF THE WEST INDIAN FRUIT FLY, THE BEAN POD BORER, AND OTHER INJURIOUS INSECTS *

HELD BY

THE FEDERAL HORTICULTURAL BOARD

10 a. m., March 18, 1925

Room 411 Bieber Building, : : : : : Washington, D. C.

Reported by C. A. LOCKE

A public hearing to consider the advisability of restricting or prohibiting the entry from Porto Rico of fruits and vegetables in the raw or unmanufactured state on account of the West Indian fruit fly, the bean pod borer, and other injurious insects, was held before the Federal Horticultural Board at 10 a. m., March 18, 1925.

Present:

C. L. Marlatt, Chairman;
Geo. B. Sudworth;
M. B. Waite;
R. A. Oakley;
R. C. Althouse, Assistant to the Chairman;
George P. Ahern, Tropical Plant Research Foundation, 1350 B Street;
E. M. T. Alcutt;
José R. Aponte, Senator from Porto Rico;
E. A. Bailey, Grower, Manatí, P. R.;
Geo. W. Bartholomew, Grower, Hartford, Conn.;

* Copy of this report furnished to the Department of Agriculture and Labor by C. L. Marlatt, Chairman, Federal Horticultural Board.

J. J. Canning;
Carlos E. Chardón, Commissioner of Agriculture and Labor of Porto Rico;
Paul J. Christian, Porto Rican Sugar Producers' Association;
Jno. E. Craig, Vice-President, The New York & P. R. S. S. Co., 25 Broadway, New York City;
Félix Córdova Dávila, Resident Commissioner from Porto Rico;
I. I. Dennison, United States Chamber of Commerce, Washington, D. C.;
Jorge V. Domínguez, Chamber of Commerce of Porto Rico;
H. L. Dozier, Entomologist, Porto Rico Insular Experiment Station;
R. S. French, National League of Commission Merchants;
R. S. Hollingshead, United States Department of Commerce, Washington, D. C.
J. R. Johnston;
E. E. Jones, Member Farm Loan Board;
G. M. Kendall, Simons Shuttleworth & French Co., 204 Franklin Street, New York City;
Frank D. Kern, Pennsyvania State College;
T. P. Lippitt, 2015 O Street, N. W. Washington, D. C.;
E. Landrón, Grower, Corozal, P. R.;
David W. May, Federal Experiment Station, Porto Rico;
D. J. Moriarty, United States Department of Commerce, Washington, D. C.;
F. E. Neagle, 62 Cedar Street, New York City;
W. A. Orton, Tropical Plant Research Foundation;
John L. Peters, Manager, Porto Rico Fruit Exchange, Inc., 204 Franklin Street, New York City;
Arthur H. Rosenfeld, Special Technologist, Porto Rico Insular Experiment Station;
H. H. Scoville, Grower, Chairman Growers' Committee, San Juan, P. R.;
Roger I. Sherman;
J. J. Souther, Grower, Vega Alta, P. R.;
Willis Spaulding, Buffalo, N. Y., representing Porto Rico Consolidated Fruit Co.;
A. D. Thomas, President, Porto Rico Express Co., N. Y.;
W. V. Tower, Entomologist, San Juan, P. R.;
Orval P. Townshend, Bureau of Insular Affairs, Washington, D. C.;
H. H. Whetzel, Cornell University, Ithaca, N. Y.;
G. H. Wildman, San Juan, P. R.;
Charles F. Wilson, Lawyer, Metropolitan Bank Building, Washington, D. C.;
E. Vidal, San Juan;
R. Kent Beattie, F. H. B.;
Peter Bissett, B. P. I.;
W. G. Campbell, Director of Regulatory Work;
L. C. Corbett, United States Department of Agriculture;

O. K. Courtney, F. H. B.;
Walter H. Evans, United States Department of Agriculture;
S. B. Herrell, F. H. B.;
Charles E. Prince, F. H. B.;
H. L. Sanford, F. H. B.;
E. R. Sasscer, F. H. B.;
Letitia Shuss, F. H. B.;
J. A. Stevenson, F. H. B.;
L. A. Strong, F. H. B.;
W. B. Wood, F. H. B.;
Debbye E. Wright, F. H. B.

U. S. DEPARTMENT OF AGRICULTURE

OFFICE OF THE SECRETARY

PRESS SERVICE

February 18, 1925.

DATE OF QUARANTINE HEARING ADVANCED

The public hearing to consider the bringing of Porto Rican fruits and vegetables under permit and any restrictions necessary to prevent the entry into the United States of certain pests known to occur in Porto Rico, scheduled for March 20, 10 a. m., Washington, D. C., has been advanced to March 18, at the same hour and place, the Federal Horticultural Board, United States Department of Agriculture, announced to-day.

The date of this hearing is advanced at the request of Porto Rican fruit growers to enable them to return to Porto Rico on the same boat which will bring them to the mainland.

The hearing is called in compliance with the Plant Quarantine Act of August 20, 1912 (37 Stat., 315), as amended by the act of Congress approved March 4, 1917 (39 Stat., 1134, 1165).

As explained in connection with the original notice, the purpose of this hearings is to make it possible to bring under the conditions of permit and inspection fruit and vegetable imports from Porto Rico so that the department may satisfy itself that such imports are free from risk of being the means of introducing new pests injurious to our agriculture or horticulture, and to take any precautions which may be necessary to exclude such pests. It is the expectation, however, that it will not be found necessary to place any material restrictions on the leading fruit exports of Porto Rico, such as citrus fruits, bananas, pineapples, and avocados.

U. S. DEPARTMENT OF AGRICULTURE
OFFICE OF THE SECRETARY
PRESS SERVICE

January 27, 1925.

HEARING CALLED TO CONSIDER PORTO RICAN PLANT QUARANTINE

A public hearing to consider the bringing of Porto Rican fruits and vegetables under permit and any restrictions necessary to prevent the entry into the United States of certain pests known to occur in Porto Rico has been announced by the Federal Horticultural Board of the United States Department of Agriculture at Washington, D. C., March 20, at 10 a. m. Among such injurious insects are the West Indian fruit fly and the bean pod borer.

Quarantine No. 56, issued by the board August 1, 1923, brought under restriction, for the purpose of inspection and safeguarding entry, all fruits and vegetables imported from foreign countries. As a possession of the United States, Porto Rico was not covered by this general action. The board believes, however, that there is just as much reason for regulating the importation of products from Porto Rico as from Santo Domingo, Cuba, and other West Indian Islands. A number of years ago the entry of fruits and vegetables from Hawaii was placed under regulation.

Persons interested in the proposed action of the board may attend and be heard either in person or by attorney.

UNITED STATES DEPARTMENT OF AGRICULTURE

OFFICE OF THE SECRETARY

FEDERAL HORTICULTURAL BOARD

WASHINGTON, D. C., *January 24, 1925.*

NOTICE OF PUBLIC HEARING

TO CONSIDER THE ADVISABILITY OF RESTRICTING OR PROHIBITING THE ENTRY FROM PORTO RICO OF FRUITS AND VEGETABLES IN THE RAW OR UNMANUFACTURED STATE ON ACCOUNT OF THE WEST INDIAN FRUIT FLY, THE BEAN POD BORER AND OTHER INJURIOUS INSECTS

The Secretary of Agriculture has information that insects injurious to fruits and vegetables, including the West Indian fruit fly (*Anastrepha fraterculus*), and the bean pod borer (*Maruca testulalis*), new to and not heretofore widely prevalent or distributed within and throughout the Continental United States, exist in the Territory of Porto Rico, and that there is danger of introducing these and other insects injurious to fruits and vegetables from that Territory.

It appears necessary, therefore, to consider the restrictions or prohibitions which should be enforced to prevent the entry of the West Indian fruit fly, the bean pod borer, and other injurious insects, with fruits and vegetables in the raw or unmanufactured state imported from the Territory of Porto Rico.

Notice is, therefore, hereby given that a public hearing will be held at the Department of Agriculture, Washington, D. C., at 10 a. m., March 20, 1925, in order that any person interested in the proposed quarantine may appear and be heard either in person or by attorney.

The hearing was called to order at 10:15 a. m.

THE CHAIRMAN: I think you have all received copy of the notice of hearing and of the explanatory statement, which was issued later, advancing the date of the hearing from March 20 to March 18 and giving the reason for such change, namely, to allow the fruit growers and others who have come up from Porto Rico to return by the same boat. I think you have also all received the explanatory statement which was issued in connection with this notice of hearing.

A year ago last August we brought under regulation, under Quarantine 56, the entry of all fruits and vegetables from all foreign countries. We had five or six or more minor quarantines which regulated particular fruits and vegetables prior to that time, but it became perfectly clear that it was desirable to have certain inspection and examination of fruits and vegetables entering this country from all countries, so that we could keep posted as to their condition of freedom from pests, and be able to detect any danger promptly. The idea was not to restrict, but to safeguard entry, making it possible to see the flow of goods as they came in and determine whether their entry was free from any risk to our own cultures. Porto Rico, being a possession of the United States, escaped this general foreign quarantine. I notice here that it says it was not covered. I don't want to use the word "overlooked." It was not covered. We would hate to overlook anything so important as Porto Rico. However, Quarantine 56, just referred to, does cover not only the importations from other countries distant from us, but also importations from the West Indian Islands—Santo Domingo, Cuba, and other islands.

We have also a domestic quarantine, as we call it, protecting us and giving us a chance to examine and safeguard the entry of fruits and vegetables from Hawaii, so that Porto Rico was left out in the cold. That seemed to be an unfortunate situation. The purpose, therefore, of this hearing is to consider not necessarily embargoes but the application to Porto Rico of the same restrictions as to permit and provision for inspection of the goods as they flow in, to determine freedom from risk.

I think it has been announced in answer to inquiries and in several letters that have been issued that there is no thought on the part of the Department now, and we hope there will be no reason at any time in the future, of restricting the entry—that is, putting any limitation upon the volume of the entry of the principal fruit exports of Porto Rico, namely, citrus, pineapple, and avocado if there are any large exports of the avocado. I undertand that citrus and pineapples are the principal exports. Such condition of freedom of entry as to volume we hope to continue indefinitely—for all time for that matter—but it will be contingent on Porto Rico protecting herself from entry of dangerous pests through importations of fruits or vegetables from countries where such pests occur. I am quite sure that Porto Rico is thoroughly alive to that necessity and I understand that precautions have already been taken and have been in force for some time to protect the cultures of that Island from such pests as the Mexican fruit fly which might gain entry through

importations of Mexican citrus fruit, or the Mediterranean fruit fly which might gain entry through importations of fruits from the countries where it occurs—the Mediterrenean countries of Europe, South Africa, etc. The principal danger to us here is from importations from the Mediterranean countries of Europe—importantions of citrus fruit or any other fresh fruits.

The specific reasons for the quarantine which are mentioned in the notice of hearing will be discussed perhaps by some of our experts a little later. Fortunately these pests that are specifically mentioned do not attack these more important cultures such a citrus, pineapple, banana, etc. It will probably be necessary, however, to exclude from the United States certain of these minor things that are attacked by these pests, but as I understand it these minor things such as mangoes and perhaps papayas and guavas have no commercial importance.

There has been some question raised as to the necessity for the permit requirement. With respect to all fruits and vegetables which enter the United States from foreign countries we now keep track of such entries and control them in a certain sense by permit and provisions for inspection. In other words, we have got to know when the fruit comes in so that we will have opportunity to have competent men ready to inspect it and see that it is permitted fruit and not fruit which must be excluded. The request has been made that we eliminate from Porto Rico the permit requirement. I think that request was made largely because of a fear that the permit will involve some severe obstacle on entry. In point of fact, that system has not interfered in any burdensome way with respect to other countries and other products, and I don't think there is any real reason to fear that it will interfere in any burdensome way with the entry of products from Porto Rico. It seems to be necessary in order that we can get our information and make provision for inspection and examination—not so much perhaps to determine absolute freedom of these particular products from infestation as to determine the fact that they are products which can come in and not some of the others that we do not care so much for.

I don't know whether it is desirable as an opening feature to ask for a brief statement about some of the insect pests known to occur in Porto Rico, but it might be well perhaps to have a few words on that subject. Mr. Sasscer is here. I don't know whether he came prepared to give that information but I think he can give it whether he is prepared or not. I will ask him to make a brief statement on that subject.

Mr. Sasscer: After issuing the notice for this hearing I attempted to bring together what appeared to be the more important insects which occur in Porto Rico, especially on fruits and vegetables under consideration. I have also prepared a statement indicating as well as I could the kinds of fruits and vegetables coming from Porto Rico to the United States. I understand that this information was furnished largely through the Fruit Exchange in New York. It includes quite a lengthy list but fortunately most of them are very small in quantity. For example, peas—68 cases; beans—5 hampers, etc. The principal commodities seem to be, in the order named: Grapefruit, pineapples, oranges, onions, bananas, and mangoes. Perhaps it will be well to refer to the insects we know attack these articles in Porto Rico and eliminate those which occur on the mainland.

Under the banana item I find no insects which we might consider as important to the crops in this country.

Under beans we have this so-called bean pod borer which apparently is rather widely distributed in the West Indies and in Central and South America. It is not known to occur in the United States. There have been some statements originating in Porto Rico indicating that this insect is possibly a rather injurious bean pest.

Under mangoes we find they are infested with the West Indian fruit fly and possibly with another species of *Anastrepha*. These have been intercepted in fruit arriving at the port of New York either in the possession of passengers or in ships' stores.

In the case of oranges, with which I might include grapefruit, there are two weevils which apparently are rather injurious to citrus in Porto Rico and which do not occur here. Whether or not they would be brought in with fruit is a matter of speculation. If they came in they would probably come as adults concealed in the cases, or they might come in with other articles. I have reference to *Diaprepes spengleri* and *Phyllophaga citri*, both of which are injurious to citrus fruits.

Under pineapples I find the so-called pineapple weevil (*Metamasius ritchiei*) which does not occur here, although we do not have, as I understand it, much pineapple culture except perhaps in Florida.

I have a long list of insects here but do not think it is necessary to burden the meeting with this long list, especially since a great majority occur here, and many are scale insects or *Aleyrodids* which probably would not accompany fruits and vegetables.

THE CHAIRMAN: What sort of injury do these two weevils cause to citrus fruit.

MR. SASSCER: They are not reported as attacking citrus fruit but as attacking citrus. How much injury they cause to the fruit I can not say. I do not have that informaion. I think Mr. Tower can tell us that.

THE CHAIRMAN: We will ask Mr. Tower whether these two insects really injure the fruit at all.

MR. TOWER: In the adult form they sometimes scar the fruit but the pupae are in the ground and the larvae are also in the ground.

THE CHAIRMAN: They are root feeders?

MR. TOWER: Yes.

THE CHAIRMAN: And if they do any damage it is superficial?

MR. TOWER: Yes.

THE CHAIRMAN: Then the question also comes up as to pineapple injury.

MR. SASSCER: The pineapple weevil is rather injurious to the fruit in Jamaica according to the entomologist, Mr. Ritchie. We have photographs showing numerous galleries in the fruit. Whether it would develop to the same extent in Porto Rico I am not in a position to say. We have to base our information on literature. According to Ritchie the insect bears watching, especially as it actually feeds in the fruit of the pineapple.

THE CHAIRMAN: There are a good many publications on Porto Rican insects and the damage which they cause, either by this Department or otherwise. Have they ever mentioned this pest as occurring in Porto Rico or as doing damage there?

MR. SASSCER: I don't think so. It is listed as occurring there but the amount of injury, if any, is not indicated.

MR. TOWER: I was going to ask Mr. Sasscer regarding the information on that weevil. The Experiment Station at Mayagüez has never taken that weevil. I thing Mr. Johnson can give us a little information regarding the weevil in Jamaica. I was talking with him yesterday and he said he could give us that information.

THE CHAIRMAN: I would like to know whether this insect actually occurs in Porto Rico.

DR. CHARDÓN: I have here Mr. Wolcott's bulletin on lists of Porto Rican insects. So far as I see it is not reported as occurring on citrus.

THE CHAIRMAN: Mr. Johnson's name has been mentioned as being able to give us some information.

MR. JOHNSON: So far as I know, *Metamasius ritchiei* was found only in Jamaica some years ago by Ritchie. I never heard a report of its occurring in any other island and in Jamaica it has practically disappeared. I am delighted to give some information from Gowdy that he has no record at present of the finding of the insect even in Jamaica, and I can not help but question the record of finding it in Porto Rico.

MR. DOZIER: There is no record of the pineapple root borer referred to for Porto Rico published or within the records of the Experiment Station.

THE CHAIRMAN: Have you had any experience as to citrus weevils?

MR. DOZIER: So far I have never observed either *Diaprepes spengleri* or *Phyllophaga citri* in the fruit itself. The eggs are laid on the foliage and the young drop to the ground and pass their life as root borers in the soil. The adults sometimes do serious damage to foliage. I think, however, that there is no possibility of their introduction in the fruit itself. There is absolutely no danger.

MR. SASSCER: Mr. Dozier is correct. The insect is not listed in this bulletin I had in mind. The notes which were drawn up some time ago indicated that this insect occurred in Porto Rico. Mr. Sanford has just handed me another note which states that *Metamasius ritchiei* was described from Jamaica as injuring pineapples. This may be in Porto Rico but we have no record.

MR. DOZIER: The only *Metamasius* we have in Porto Rican is *Hemiptera*. We looked for quite a time for *richiei* but none was seen. So far as *Diaprepes* being introduced on fruit, there is no chance of the adult *Diaprepes* getting into citrus fruit—no chance whatsoever.

THE CHAIRMAN: Gentlemen, this hearing is now open for any discussion which anyone wishes to indulge in, especially the proposition of bringing the fruit and vegetable imports of Porto Rico under the restrictions which I indicated, namely, under permit and provision for inspection.

MR. SCOVILLE: Mr. Chairman, on behalf of the fruit growers in Porto Rico I am acting as chairman of a committee who have come to present our wiews of this matter to you. If there is no objection—we are farmers rather than speakers and if I may talk sitting I would prefer it.

THE CHAIRMAN: There is no objection whatever.

MR. SCOVILLE: Now, naturally upon the receipt of this notice we farmers of Porto Rico were somewhat alarmed that restrictions

might be put in force which would materially injure our industry. We satisfied ourselves that the board was certainly disposed to deal fairly with us on the proposition, and we come with the idea of presenting such facts as we have to present.

Mr. Chairman, Doctor Chardón, the Commissioner and head of our Department of Agriculture in Porto Rico came with us and brought along two of his chief technical men, Mr. Dozier and Mr. Rosenfeld, who have spent considerable time investigating the Porto Rican pests. He also has charge of our local quarantine work—or rather it comes under his Department—and he will tell you a little later as to the effectiveness of that and the efforts we are making to maintain a strict quarantine because we are comparatively more interested in Porto Rico in the maintenance of a strict quarantine and the prevention of entry of the Mediterranean and Mexican flies to the Island than the people in the United States are, because our citrus industry and our coffee industry, both of which would be seriously affected by these pests and might be wiped out, constitute two of our four principal industries; hence you can see the importance that it has to us. We confess that we were a little bit surprised, Doctor, at the notice which was issued by the Department, suggesting that it was the opinion of the board that Porto Rico should be included with Cuba and Santo Domingo and other foreign countries. Of course, you did not use the expression "foreign countries." We feel very much a part of the United States down there and take a good deal of pride in it, but in addition to that we feel that Porto Rico, being a part of the United States and your quarantine regulation No. 56 which you are suggesting be applied to Porto Rico at the ports of the mainland is already in force at the ports of Porto Rico as against foreign countries. Our inspectors—our Chief Inspector, acting under authorization of your board, is endeavoring to enforce all of your regulations as to the importation of foreign pests in Porto Rico. Porto Rico has been covered reasonably thoroughly, entomologically and pathologically for the last eighteen years and our pests are, we feel, reasonably well known. Your board has thorough jurisdiction and can obtain as full information as to Porto Rico as it can as to any other part of the country. It can not do that necessarily as to foreign countries. It can not restrict the entry of goods into foreign countries but it can draw the line at the ports of Porto Rico. Our feeling, and what we are very anxious to have done, is to have this board lend its strong arm to our protection at our own ports rather than draw a line between us and the mainland, where we must necessarily market all of our prod-

ucts and from which we purchase practically everything that we use or consume. I can see that it is true from one standpoint—the reasons for the suggestion that Porto Rico might be included with the other West India islands. The impression not infrequently prevails that Porto Rico, being amongst the West Indies, naturally would be subject to the pests which prevail in all of the other islands and that its communication between Mediterranean and South American countries would be great. The opposite is the fact. The exchange of goods and the passenger traffic between Porto Rico and the other West Indian Islands is very slight—in fact, if you want to get to any other West Indian islands except Porto Rico we come to New York and then go there. That applies to Cuba, Jamaica, Bahamas, and any others except Santo Domingo and the Virgin Islands which are now virtually part of Porto Rico. We come to New York and then go back. Our importations are very slight. We have one Spanish steamer a month that touches the Mediterranean ports. We have another ship that comes almost about monthly from France and touches at the northern ports, the most southern being Bordeaux, and carries only manufactured articles. Of all of our foreign ships which touch Porto Rico none ties up to a dock. They all anchor off port in the stream. What goods and passengers they have are unloaded in lighters and taken through immigration and customs inspection and then landed. Porto Rico perhaps offers the easiest problem in the way of enforcement of quarantines of any part of the United States.

THE CHAIRMAN: What precautions do you take to see that passengers don't bring things ashore, and what precautions do you take with ships' stores?

MR. SCOVILLE: The passengers are examined as they come ashore. Our inspectors have taken fruits once in a while from the pockets of passengers as they came in. No inspection service is lacking. From the information I have received every reasonable effort is made to protect that, and that in addition to the fact that the passenger communication is so very slight. We feel that it is easy to put into force a very effective measure and that very effective measures have been put into effect. In 1912, as a member of the old Board of Commissioners of Agriculture of the Island, I had to do with the appointment of Mr. Tower to inaugurate our inspection service. We sought a technical man who would appreciate the necessity of care, and, in fact, I recall that we looked with a great deal of pleasure on the establishment of this board and the administration of a more effective quarantine policy.

DR. CHARDÓN: Here is a short paper that we hand to every passenger coming into Porto Rico. It states:

GOVERNMENT OF PORTO RICO
DEPARTMENT OF AGRICULTURE AND LABOR
Plant Quarantine Inspection

NOTICE

We beg to inform all passengers arriving at or leaving Porto Rico that the importation and exportation of plants, seeds, fruits and nursery stock is regulated by Act No. 17, approved by our Legislature and also by Federal laws.

These regulations are clear and definite, and if you intend to *import or export any of the above-mentioned material*, you should request information from the Department of Agriculture and Labor before you receive or ship such material.

This may avoid possible trouble.

Approved:

L. A. CATONI,
Chief Plant Quarantine Inspector.

JAIME BAGUÉ,
Assistant Commissioner of Agriculture and Labor.

We hand it to each one of the passengers coming to Porto Rico.

THE CHAIRMAN: We find it necessary here at our ports to make an actual examination of the baggage of passengers and we intercept a great many fruits and vegetables in the course of the examination, many of which are infested. We also find it necessary to go aboard ships and go into their stores and lockers, and very frequently we find infested fruits and vegetables. It should be remembered that the fruit fly has been carried about the world probably very much by ships' stores. It is the belief that it gained entry into Hawaii by ships' stores. It was probably on board the ship and flew off to the shore.

MR. SCOVILLE: Of course, all of our baggage is thoroughly examined and inspected. Every customs agent holds everything of that character and a thorough inspection is made of all baggage and our inpectors are present at those examinations. We are in a position to keep close touch on the matter of baggage. The most difficult part would be persons carrying fruit but we have another advantage there. That is, the distance we will say from Spain to Porto Rico. Ships coming from Spain take anywhere from 9 to 12 days to make the trip so that a passenger returning from Spain would not be so likely to carry those things along. The ships are in tropical waters for most of the voyage. It is not like a short trip where a person might try to smuggle them in. Everything of that

kind is reasonably covered and if there is any way of strengthening it I am sure Doctor Chardón on his return to Porto Rico in January went through his Department in every way as carefully as possible and insisted upon the absolute strict enforcement of every regulation.

THE CHAIRMAN: We will be very glad to give you the benefit of our own experience to enable you to enforce at San Juan or other ports the same ship and passenger and crew and cargo inspection as we are enforcing at our ports of entry.

MR. SCOVILLE: We assure you we are glad to have every ounce of assistance you can offer in that way.

THE CHAIRMAN: Perhaps it may help the situation to point out at this time, before you go further, that we agree absolutely with what you say about Quarantine 56 and Porto Rico being an integral part of the United States, but I am afraid you got the wrong idea of what was announced. We have not announced that we propose to put you under Quarantine 56 as a foreign possession. We are going to give you a brand new quarantine that has never been used. We intend to treat you as we treat Hawaii, New England, California, or other States. It will be a domestic quarantine making provision for such inspection as may be necessary and excluding, I hope, very little.

MR. SCOVILLE: We don't want to be treated as Hawaii is treated because Hawaii has the Mediterranean fruit fly.

THE CHAIRMAN: You will not be treated that way. We will wait until you get it

MR. SCOVILLE: Of course, Hawaii is taken care of because of the existence of that definite destructive pest. We appreciate that and naturally the next question seems to present itself which offers serious concern to us, namely, the matter of the introduction or placing us under a sort of blanket permit system—a blanket quarantine system, rather, whereby we enter different lines of fruits or products by permit. I understood in your preliminary statement that this had not caused serious damage or loss to importers from foreign countries. Of course, we hear various reports in regard to that but we haven't investigated it thoroughly. We know that any system of permit or regulation or holding up for examination would necessarily cause some loss or damage in time. That would not be so great in regard to importations from foreign countries as from Porto Rico. In the first place, all foreign goods and ships carrying foreign goods must clear at the custom house. There must be a customs examination of the cargoes. There is necessarily a consequent delay of at least 12 to 24 hours in the movement of foreign goods from

the docks or from the customs authorities. During that period, of course, your inspectors have usually ample time to make or conclude their inspections and by the time the goods are ready for release by the customs authorities they are ready for release also from any examination which your inspectors would require. Our ships tie up to the docks and within an hour from the time they have tied up to the dock we will have perhaps truckloads of samples of those different lines of fruit on the way to the sales room. Not infrequently we will sell those goods within six hours after the arrival of the ship. The moment the ship starts discharging we will have lighters alongside the dock and begin loading citrus fruit and pineapples into those lighters for immediate movement so that in order to make any inspection whatever there would be necessarily delay. That delay to us would mean necessarily loss. We find that—we plan our shipments and the steamship companies have met our requests to sail ships from Porto Rico so as to arrive at daylight Monday morning. That is because we have found from experience that a sale on Monday or Tuesday means usually an increased price of from 25 to 50 cents a box over a sale on Wednesday and similarly on Thursday, because in the handling of perishable fruits—especially pineapples or oranges such as the Porto Rican variety, which is a large, very juicy thin-skinned orange, which does not stand up long after maturity, the dealers—the retailers particularly—are not interested if it reaches the stores too late to move before the week-end, hence the heavy discount on any sales after Tuesday. We must have our samples out during Monday in order to sell Tuesday as a rule. If the ship gets in at 5 o'clock Monday afternoon on account of delay, we would start unloading at once. The ships work all night. We would be ready to sell the next morning. That is part of the program which we feel that this board probably had not gone into, more particularly because we can readily see that your position is substantially correct so far as any interference, loss, or damage to foreign importations is concerned on account of the inspection, but we are convinced that it would mean very serious detriment to us. The margin is slight and the profits we are able to sustain on this fruit and we have to move it under the most advantageous conditions in order to meet market requirements.

If there is any question you would like to ask I would be glad to answer you.

THE CHAIRMAN: Would you like to have these points discussed one after the other as we go along?

Mr. Scoville: Yes, I think it would be better to discuss them as we go along. We can perhaps arrive at more definite conclusions if we know just what is what.

The Chairman: Mr. Strong is present. He is in charge of the port inspection work. I appreciate what you say about the necessity of getting your material to market. Your boats usually come in on Monday and your anxiety is to get the fruit in the hands of the dealers not later than Tuesday.

Mr. Scoville: Yes. Occasionally the ships will be delayed and in the heavy shipping season we use more than one ship—smaller ships which get in usually on Tuesday. The boats will come in with anywhere from 25,000 to 60,000 boxes of fruit. We may have three of four ships arrive on the same day or within one or two days, all carrying cargoes of fruit.

The Chairman: The inspection of this fruit does not need to be very extensive. It is an examination of the fruit to determine the general nature of it; that is, that it is oranges or pineapples, and the actual examination of a few crates that would be taken probably could be made right along with the movement of the product from the ship to the dock. Mr. Strong is here and is probably familiar with the situation in New York, and he may have some information as to the actual handling of Porto Rican fruit. I would like to have him tell us how much delay there would be.

Mr. Strong: The possibility of delay in connection with foreign shipments is absolutely on a par with any domestic shipments. The entry of foreign fruits is made on what is called a "preliminary entry". The entry is reported before the ship arrives in port. We are furnished with a broker's notice of arrival giving us the number of cases of each commodity. We issue inspection cards and our men meet the vessel at the dock and oversee the inspection of the baggage and the immediate inspection of the ship's stores and crew's quarters, and that is usually done before the cargo is unloaded on the dock. When the material comes on the dock our inspectors are there. There is no interference with the loading and there is no delay. Our inspection is almost invariably made and completed before they want to move the fruit off of the dock. We take probably 10 or 15 cases out of a given lot and make a very thorough examination. That gives us as thorough knowledge as we can get of the condition of the entire shipment, so that loading is going on at the same time the discharging is going on. Our inspection is also going on and there is no interference or delay. With the material from Porto Rico the conditions would be exactly the same except that there

will be the necessity of making entry at the custom house. We would require that you furnish us with notice of arrival giving the number of cases of each commodity arriving. Our men would be on the dock. The inspection would be prompt and continuous. There would be no delay. I think we would almost be willing to give a prize if the vessels all arrive at daylight. If they arrive at daylight our men will be there. There is no eight-hour day in the port work. They are there at daylight and like to have the vessels arrive early. Our greatest difficulty is having the material discharge promptly so we can make our inspection and get it over with. If a vessel arrives at 5 o'clock in the evening I don't know whether we could make the inspection. If it was daylight we could continue to work until dark. If not, our men would start Tuesday morning and could make the inspection promptly.

I want to mention one more thing. Mr. Scoville spoke of the distance these vessels travel to reach Porto Rico. We have found live Mediterranean fruit flies on apples and pears on ships that came from Algiers.

MR. SCOVILLE: You misunderstood my suggestion. I was referring to the fact that passengers were not likely to carry fruit that distance.

DR. WAITE: In case pests were found during the inspection, then what?

MR. STRONG: If pests are found it is all off with the material it is found in.

DR. WAITE: How about the whole cargo?

MR. STRONG: If we were inspecting a cargo of mangoes and in that cargo there were other materials such as beans and peas not likely to be infested by fruit flies and the mangoes were infested the mangoes would be rejected. The only possibility of the other material being rejected would be that it was so close to the mangoes that if the mangoes were infested the flies could come out and might go into the containers of these beans and peas.

THE CHAIRMAN: I think the point Dr. Waite had in mind is this: If you found citrus fruit infested with the Mediterranean fruit fly or some pest that was distinctly a menace to our cultures here, that necessarily would mean the stopping of the import.

MR. STRONG: Yes.

THE CHAIRMAN: That is the whole purpose of the thing—to keep this country and Porto Rico free. We are anxious to have Porto Rico kept free but if by any chance Porto Rico becomes infested, unfortunately for Porto Rico, we could not take that par-

ticular fruit any more. We desire Porto Rico to protect herself in the most efficient manner.

MR. SCOVILLE: Taking a shipload which arrives in New York with 40,000 or 50,000 boxes of fruit from, say, 100 different shippers consisting of grapefruit, oranges and pineapples, what would you think would be a reasonable time for inspection of that cargo? Each lot is a separate lot from a different plantation or packing house.

MR. STRONG: I don't know that we are able to definitely trace each particular shipment to the shipper, but the practice in connection with shipments from Cuba, for instance, is this: The material is unloaded from the ships. The different ranges and marks are blocked off. The beans, peas, eggplants, etc., are blocked off on the dock. Necessarily it has to be brought off and placed in these blocks. We take a few packages out of the different blocks and our inspection is completed by the time each particular block is unloaded.

MR SCOVILLE: Different blocks might come from different parts of the ship. If you found infestation in a particular block there is no way of separating that particular block from the cargo of the ship. There is no way of knowing what other part of the cargo was in contact with that block.

MR. STRONG: If we found any block infested we would feel justified in holding all of the material until we determined the facts.

THE CHAIRMAN: We are not anticipating finding the Mediterranean fruit fly in Porto Rican fruit. If we do, that puts a cloud on the Island of Porto Rico. It would put a cloud on all products from that Island and would necessitate a revision of the quarantine, but the hope and expectation is that there is no Mediterranean fruit fly in Porto Rico. You would know it and we would know it if there were. It is not a question of excluding a shipment or block on account of such insects.

MR. SCOVILLE: Wouldn't it be proper if the inspection were arranged in the Island? If one of your inspectors, for instance, could visit our Island? Practically all of the ships clear from two ports but nearly all of them clear from the port of San Juan. As that fruit comes in your man could go about among the packing houses and see the fruit as it comes from the field and also keep in touch with the loading of the ships in San Juan, largely to prevent our getting into the ships any prohibited cargoes such as mangoes, etc. We are in favor of it. We think this board would do less than its duty if it did not prevent the entry of mangoes, guavas, and other fruits that are common hosts or common carriers even of the West Indian fruit fly or the bean pod borer. We think it is going to be

a reasonably easy matter, particularly after the thorough agitation we have had in Porto Rico, to keep all of those things off our ships and keep them out. In case your board should later find it necessary to make an inspection of the principal products, meaning citrus fruits and pineapples, and such vegetables as are known to be free from attack by these pests—but in connection with the one point made by Mr. Strong, a foreign ship brings a manifest. It ties up at the dock but it can not begin to discharge at once. It must take time to clear through the custom house. That gives them time to furnish you copies of their manifests showing the quantities of each particular line of fruit, does it not?

MR. STRONG: These foreign vessels which come with fruit have already made preliminary entry at the custom house. They can proceed to discharge the material as soon as the ship is tied up at the dock. In most cases you will find that before the passengers are all discharged the cargoes are coming off. They make arrangements by preliminary entry. They are assigned a regular entry number later on. There is no delay in the discharge of foreign fruits.

MR. DOZIER: We have reason to believe that the Mediterranean fruit fly does not exist in Porto Rico. We also have reason to believe that the West Indian fruit fly does not exist in Porto Rico attacking citrus fruit. Our argument is not to enter mangoes and those things which are definite food plants of the West Indian fruit fly. The matter simmers down to citrus fruit, pineapples and those things not recorded as being attacked by the West Indian fruit fly. I would like, for the information of the whole meeting here, to have the board state whether they have intercepted any West Indian fruit flies in citrus shipments from Porto Rico or from foreign countries. If there is danger the whole point hinges on that. If we had a shipment of citrus fruit coming up here and the West Indian fruit fly was found attacking it, there would be ample reason for condemning the shipment. We have no knowledge of its attacking citrus fruit in Porto Rico. I would like for the board to state their findings—whether they have found the West Indian fruit fly, not the Mediterranean fruit fly.

THE CHAIRMAN: Mr. Sasscer, do you wish to answer that?

MR. SASSCER: In my prior statement made a moment ago I did not indicate that the West Indian fruit fly had been found in citrus from Porto Rico. The only records of the West Indian fruit fly in Porto Rico are on mango, guava, jobo amarillo, jobo de la India, and Eugenia jambos.

MR. DOZIER: From Cuba, Santo Domingo, or any other country, have you found it in citrus or pineapples?

MR. SASSCER: We found a species of *Anastrepha* in citrus but I don't know whether it was fraterculus. That was in grapefruit from Cuba. Mr. Courtney found it when he was at New Orleans several years ago.

THE CHAIRMAN: Was that identified as *Anastrepha?*

MR. SASSCER: Yes, but the specialists could not go beyond that. As I recall it, that is the only interception of the kind.

THE CHAIRMAN: It is not at all impossible that there may be a rare case of a maggot of these other fruit flies coming in citrus fruit. The insect may lay eggs under some abnormal conditions in citrus fruit and there is a possibility, of course, that infestation may result. In our examination of citrus fruit from the West Indies and Mexico, Central America, etc., we find that these native fruit flies which occur throughout all that region do not attack citrus. The citrus is clean. It is so unusual and exceptional that we are not refusing, for example, the entry of citrus fruit from Cuba and the Isle of Pines. We made an extensive examination of Cuba and the Isle of Pines with that particular point in view. We are not anticipating any trouble with Porto Rico on that score.

MR. SCOVILLE: In all probability, with the millions of boxes of citrus fruits and pineapples which come in from Cuba and other West Indian islands, if they were hosts or carriers of the West Indian fruit fly it would have been distributed by this time.

THE CHAIRMAN: If the West Indian fly was going to be a serious pest of citrus it would have done so in southern Mexico and Cuba long ago. If it can not demonstrate any menace to the crops in these most favorable countries it is not likely to be a menace to the crop of the United States, and that enters into our estimation of its menace.

MR. SCOVILLE: With regard to our communication with Mexico, we have never had any direct communication until a few months ago when we had a tank steamer which carries crude oil to the port of Ponce, Porto Rico. That, of course, takes oil only and carries no passengers. It discharges its cargo in the usual way through pipe lines from the tanker, so our communication with Mexico and our possibility of infection through Mexico with the Mexican fly is rather remote.

THE CHAIRMAN: I wish to impress again, however, on you and Dr. Chardón and other concerned the fact that you have to deal with a vessel which brings oil by examining the ships stores. It may

bring several bushels of Mexican oranges. That is almost certain, coming from Tampico or Vera Cruz. They would probably with absolute certainty be infested with the Mexican fruit fly. The flies could breed on the fruit on those ships and then fly ashore. You should put a man on board and get into the ship's stores and see that any fruit is boiled or burned immediately and the ship's lockers cleaned out. That is what we do with ships that come into New Orleans and coming into our Pacific ports and other places, In fact we do that with all ships now, even at Boston. But you should use a good deal more vigilance than we do at our northern ports.

DR. CHARDÓN: When we received the notice of this hearing we thought it a very strong point to send the entomologists of the Insular Department on an inspection trip throughout the citrus region of Porto Rico in order that they could ascertain whether or not this West Indian fruit fly could occur or were in grapefruits or oranges, and the Department of Agriculture of Porto Rico has three entomologists, two of whom are here. I have reports from each of them here, written reports which I want to submit to the board.

The first report was drawn by Mr. Barrett who examined the western section where the wild orange grows in great quantity. Here is his report, stating that he had not found a single case of oranges being infested with the West Indian fruit fly. His report is quite extensive and I don't think the members would like to hear it all at this time. There are several photographs which Mr. Barrett took to submit. He says "It, therefore, is obvious that *Anastrepha fraterculus* does not occur as a citrus fruit pest in the 'Western orange district' of Porto Rico." (Mr. Barrett's report is attached as Appendix A.)

The second report was made by Mr. Rosenfeld who spent several days in another citrus section of the Island. His report concludes: "Summing up I beg to inform you that in the inspections made in the above-mentioned districts I have been unable to find the slightest evidences that the West Indian fruit fly is attacking citrus fruits." (Mr. Rosenfeld's report is attached as Appendix B.)

I have a third report by Mr. Dozier who is also present. He spent also several days in other citrus sections of the Island. He states: "On a whole the Entomologist has found the groves of citrus in Porto Rico to be remarkably free of serious insect pests and the packing houses are run in a very efficient and modern way with modern equipment." (Mr. Dozier's report is attached as Appendix C.)

These three reports prove that we have been unable to find the

West Indian fruit fly either on our oranges or grapefruit in Porto Rico. It looks to me, Mr. Chairman, that the main issue of this hearing is to prove to your satisfaction that we have a Department of Agriculture in Porto Rico which has competent men—competent technical men, who are studying all this problem of insects. The Department of Agriculture in the last two years has received a great increase in the appropriations from the Insular Legislature and in spite of the economies now being done by the Government of Porto Rico I can assure you that the Department of Agriculture will receive more money. We have here with us a representative from the Insular Legislature, Senator Aponte, who will tell you about the way the Legislature feels about the situation. I want to submit also the following statement to the board by Dr. Mel. T. Cook, who is the Chief Plant Pathologist of our Station.

(Dr. Chardón then read the following letter):

GOVERNMENT OF PORTO RICO
DEPARTMENT OF AGRICULTURE AND LABOR
INSULAR EXPERIMENT STATION
Río Piedras, P. R.

March 9th, 1925.

DR. C. L. MARLATT,
Federal Horticultural Board,
Washington, D. C.

DEAR DR. MARLATT:

I wish to reaffirm to you in writing, the statement which I made to you in your office last January. I believe our plant quarantine and inspection service to be satisfactory. It is much more difficult to bring plants on this Island without being detected than it is to carry plants across a state line. Therefore, it is much easier to enforce prohibitive quarantines here than in the States. We have an Insular Quarantine Board, of which I am a member, that considers all questions concerning importation and inspection of plants. I believe Mr. Luis A. Catoni, Chief Quarantine Inspector, to be efficient and reliable in his work.

I trust that you will keep Commissioner Chardón and Mr. Catoni informed of all Federal regulations so that we may coöperate with the Federal Horticultural Board in every way possible.

Very truly,

(Sgd.) MEL. T. COOK,
Plant Pathologist.

DR. CHARDÓN (continuing): Now, coming again to what I think is the main issue here, we want to state to you, of course, that in our judgment our quarantine is a strict quarantine and we are as anxious to keep away insects from Porto Rico as you are to keep them away from the States. If in any case you think that our Insular plant quarantine is not effective enough we are willing at any time to admit any suggestions on your part. We are willing to

coöperate with you and are willing to follow any suggestions on your part, because this is a very vital point to our economic development. This is a very important action to Porto Rico.

Now, in order to impress you about this—and I want to say that very often in the States you fellows don't have a clear notion of Porto Rico, of what we are doing, of who we are—in order to prove to this quarantine board the character of the work and the spirit in the Department, I have brought here two noted men, pathologists, Prof. Kern from Pennsylvania State College and Prof. Whetzel from Cornell University, who, without any pay, spent last summer in Porto Rico. They had an opportunity of getting in close touch with the Department of Agriculture and they can very impartially and very justly state to you what is their opinion about the general character of our Department, whether we have good technical men, whether we are keeping politics out of the Department, whether they think our inspection work is effective or not. I would like to ask that a brief statement be made by Prof. Kern and another by Prof. Whetzel regarding the Department of Agriculture of Porto Rico.

THE CHAIRMAN: We will be glad to hear from these two gentlemen.

PROF. KERN: It was my privilege to visit Porto Rico last summer in connection with a collection trip which we were interested in collecting parasitic fungi of the Island as a part of a larger scheme to make known the entire flora of the Island. I had the opportunity, as the Commissioner stated, to meet the men in the Departmental work there, to meet the inspectors, to meet the men at the Experiment Stations, and to become acquainted with their spirit and attitude, and with their abilities, and I am very glad to say that beginning with the man in charge of the work, who is himself a scientist, and who has done noted work in plant disease lines, and throughout his Department, I find they are very much interested. They are very much alive to all of the possibilities of the importation of pests. They have shown a degree of ultimate scientific foundation by the fact that they are coöperating and building up a fund of foundational knowledge about the parasitic pests and parasites and diseases in a way that hardly any of our own States of the Union are doing. They have a knowledge now not only of the things that are known to be of economic importance, but through their service and coöperative efforts they are listing all things, even of potential possibilities, and it was in connection with this work that I became very much impressed with their ability to handle such a situation as that of keeping these things out of Porto Rico, so it seems to me that in con-

nection with your statement that there is as much reason for regulating the importation of products from Porto Rico as from Santo Domingo and other West Indian Islands—this is a part of the United States and we have there as a part of our own service this Department with the fine organization it possesses and with the spirit that it has—that the situation is different. It is impossible to regulate what may go into Cuba or Santo Domingo, but it is possible and is being done in Porto Rico and if we can keep things out of Porto Rico, as I believe they have been doing, we can not get anything out of Porto Rico that isn't there. It seems to me on the whole that they have their hands very thoroughly on the situation and that that does alter the trade relations between this isolated island, so that if we expect to trade with them and to keep our trade relations with them it seems to me we are getting at the source of the possibility by careful regulation and coöperation with them as to what goes into their Island and, of course, they are fundamentally interested because the whole progress of their cultures of these products depends on keeping them free. I am sure we can depend on their interest in the matter and it is my observation that we can depend on their scientific ability.

PROF. WHETZEL: I have not much to add to what Prof. Kern said. I was with him down there and kept close track of his comings and goings and I think he is telling the truth. The Commissioner of Agriculture and Labor—I think I know Dr. Chardón a lot better than you do—is a graduate of Cornell University and has a Master's degree in plant pathology in that institution. I think there is something to be said in his favor when at so young an age he holds so important a position. I think it is to the credit of Porto Rico that they have for a Commissioner not a politician but a man trained in agriculture, and particularly in the line of plant-disease control, and it is reasonable to expect in such circumstances that he would leave no stone unturned to protect his country from new pests from other places. I should like to ask, Mr. Chairman, if it is incompatible with the policy of the Federal Horticultural Board to consider a proposition of this sort: It seems to me that much of the difficulty—the apprehension at least by the fruit growers of Porto Rico—might be met and the Federal Horticultural Board be entirely satisfied if there could be placed in Porto Rico an inspector of the Federal Horticultural Board—stationed there. It is a part of the United States. Why not step in there—station a man there. He could be immediately under your direction and inspect all shipments out of Porto Rico from the port of shipment, being there permanently.

He will be in a position to inspect the groves and plantations at times when shipments are not in process. He will be able to inspect the packing houses and shipments to see the way things are shipped out of Porto Rico to satisfy you. When they arrive in New York they will already have had your inspection by one of your own men. That would relieve you of the expense of operating at the port of entry, aside from the fact that you also protect Porto Rico. You would be able to give them a protection not only in shipping their stuff out but also helping them to keep these things from coming in. I can not speak for Porto Rico to be sure, but it is my impression that Dr. Chardón would be quite willing to recommend to the Legislature, if necessary, that they bear the expense of such an inspector, the entire control of that man to be in the hands of the Federal Horticultural Board. I don't know if that is possible but it would seem to me that it is a sound business basis for meeting this situation which would relieve the growers of apprehension as to inadvertent breaking of the rules and regulations. Inspection of imports at New York would not be necessary and you would have the additional advantage that the Federal Horticultural Board could know first and constantly what pests are there. You would not need to depend upon the word of Dr. Chardón or anyone else and it would be a distinct advantage to Porto Rico. If you want to serve Porto Rico it is my opinion that in this emergency you could do nothing better than make that type of arrangement. Station a plant-quarantine inspector permanently in Porto Rico or at certain times of the year when there are things to do. There are many advantages.

DR. CHARDÓN: Of course that may be arranged any time and it is acceptable to us but we are not yet convinced that there is any possibility of bringing into the States any of the insects in the citrus fruits and in the pineapples which are not now here in the States and that is the point we are here to argue. If that is the feeling of the Federal Horticultural Board that they want to send an inspector we are willing to accept it. We are willing to pay his salary. Dr. Marlatt can appoint him.

To prove to this commission the feeling of the Legislature of Porto Rico which is now in session at this moment, I would like to have a statement submitted by Senator Aponte. Mr. Rosenfeld will translate it. This will show you that the Legislature is intensely interested, that it will coöperate with you, and will appropriate any amount of money:

SENATOR APONTE: Mr. Chairman, it is a great satisfaction for

me to express to you the feeling of our Insular Legislature, of which I have the honor to be a member of the Senate. I have recently had the honor to present to the Porto Rico Legislature a project of reorganization of the Insular Department of Agriculture and my words here are backed up by both chambers, the Chamber of Deputies and of the Senate. At this time we are in Porto Rico carrying on a policy of economy but we will never think of passing any law which will in any manner inhibit the most efficient working of the Department of Agriculture. Mr. Chairman, you have just heard what two well-known professors from prominent institutions in the United States have had to say with regard to the agricultural organization in Porto Rico. You have taught us much in Porto Rico and we are studiously applying there what we have learned from you. I am authorized by the Legislature of Porto Rico to assure you that we are willing to make any sacrifice and any appropriation in order to have not only a good quarantine service but, if possible, the best in the world, not only to defend Porto Rico from any pest which might enter but also to defend the United States, our principal market, from any pest which might also enter there. We are very pleased in Porto Rico with the way in which the Department of Agriculture is carrying on its investigations and we are thoroughly disposed to support this work in any and every way that will tend to its increased efficiency. I can show to the Chairman of this meeting a cable which our Resident Commissioner has recently received from Rafael M. González, as follows:

SAN JUAN, P. R., *March 17, 1925.*

HON. FÉLIX CÓRDOVA DÁVILA,
House of Representatives,
Washington, D. C.

The House approved Pérez Cruz resolution pledging good faith to provide $15,000 in budget to increase quarantine service. Committee Ways and Means supports resolution.

(Sgd.) RAFAEL M. GONZÁLEZ.

I am a member of both the ways and Means and Agricultural Committees of the Senate and I can assure the Chairman that the Porto Rico Legislature is going to make full provision to assure what we have just stated—an excellent and, if possible, unexcelled quarantine service, and now I am perfectly willing to reply to any question that the Chairman or any other member desires to make.

THE CHAIRMAN: Senator Aponte, I wish to assure you of our pleasure at the receipt of these assurances of interest and protective work which you propose to support and aid for the Island of Porto

Rico. I am well convinced that the people of Porto Rico who are interested in fruit and other products are awake and alive to the need of keeping pests out of the Island and maintaining its wholesomeness and soundness in that particular so that its markets will not be interfered with, and these assurances we are very glad to get. I don't know that I need to say much more, except to say that we recognize the difference in status of Porto Rico from other West Indian Islands. We fully appreciate that difference. We have in Porto Rico agricultural stations. You have your own Department of Agriculture stations. We know the Island is equipped with technical men. I am mighty glad to know that your Commissioner of Agriculture and Labor is a technical man. All of those conditions are not found in the other islands. There is a possibility to work in close coöperation with you and to limit any restrictions on the movement of your products, and we propose to do that. We are not putting you on the basis of the foreign countries under Quarantine 56 nor on the basis of Santo Domingo and other West Indian islands. We are treating you in a new way, taking account of the long period of good quarantine work that has been done. We are anxious to coöperate with you in all of those things and to see that any weak spots are covered, as, for example, in the inspection of vessels that may come to your ports. It seems to me that now the chief thing we are considering is whether this permit system is really a necessity on our side and whether the restrictions, if we call them such, which it makes, or delays which it may involve, are as serious as you think they are. If it amount to no delay it is simply a record so we have statistics of the movement of these products, and if the inspection can be made in such a way that there will be no delay in the movement of the products from the ship to the dock and from the dock to the commission house, then perhaps it is not a serious matter. If there is some other method of accomplishing the same purpose—by a resident inspector in Porto Rico—we are willing to consider that.

I feel there has been a rather over-emphasis on the matter of delay and restriction on prompt movement of the products. There is another phase of it. The very fact that we know so much about Porto Rico as compared with Cuba and Santo Domingo—that you have this internal control in the Island and these competent men on the Island studying these pests all the time, both men from this Department and men of your own—makes is possible for us to make this inspection on a much more liberal basis. The necessity for radical inspection does not exist in the same way and that will

serve to lessen this fear of delay. However, we are willing to consider any or all of these propositions.

I wish to thank Senator Aponte again for his statement.

COMMISSIONER DÁVILA: I want to say only a few words about this important matter. You have heard the gentlemen who have come from Porto Rico. They have presented a case in a very able way. It is my opinion that they have shown beyond any doubt that there are not any pests in Porto Rico of the kind of which you have spoken here. We come here with a spirit of coöperation. We want to coöperate with you. We want to share the responsibility. We want to defray if it is necessary all of the expenses that we can afford to defray to guarantee that not any kind of pest will be introduced in Porto Rico from any foreign country. We know you want to be frank. We know you consider Porto Rico as an integral part of the United States, not a possession of the United States. We don't like that word "possession." We want to be an integral part. Our spirit is not a spirit of antagonism. We want to be helpful. The Legislature of Porto Rico is ready to appropriate any amount of money which will be necessary for this purpose. We are deeply interested in this matter and the best evidence of our interest is shown to you by this splendid presentation. You have here the head of the Porto Rico Fruit Exchange, the head of the Porto Rico Department of Agriculture and Labor, you have here Senator Aponte sent by the Legislature. You have here Mr. Domínguez, representing the Chamber of Commerce of Porto Rico. You have here our friends from the United States who know the interest you have in this matter—Prof. Whetzel from Cornell University and Prof. Kern from Pennsylvania State College. They are here not to prevent injuries from being done but to present the facts so clear that with your spirit of justice you will do the right thing in this matter. I want to read here a telegram from the Speaker of the House of Representatives, Mr. Tous Soto:

> Please convey to Federal Horticultural Board that House of Representatives of Porto Rico has just adopted resolution pledging itself to appropriate whatever moneys should be necessary in case our fruit industry should be threatened with any plague. Full text of resolution is being sent you by mail.

You see the interest we have in this matter and this spirit of harmony which exists between the people of Porto Rico no matter whether they were born in the United States or in Porto Rico. We have people from the States and from the Island working in perfect harmony in a perfect brotherhood with every spirit of coöperation to do what we think is our duty.

Mr. Scoville: Dr. May, the Director of the Federal Experiment Station at Mayagüez has appeared not as a grower but at the instance, as I understand it, of many orange growers at Mayagüez who insisted on his Department seeing that he came to this hearing. I am sure his observations would be interesting to the Board.

Dr. May: We of the Federal Experiment Station here are in a way pioneers in agricultural work down there and while we have not grown financially as we would have liked, still we feel that we have done some good in the Island. One of the things that came up this morning I would like to call to the attention of the board—the question of some of our minor fruits that the Federal station has been endeavoring to make a commercial possibility. In considering the quarantine against our products down there I want to say one word, and that is this: that if the Federal Horticultural Board finds it necessary to prohibit the importation of certain of our fruits that we are trying to establish as a commercial possibility, that they do not finally bar the doors but to leave it in such a way as to permit entry in the future if conditions indicate that they can be brought in without danger to the fruit industry of the entire country. I refer to the mango and other lesser-known tropical fruits that we have had under investigation. I thank you for the opportunity of speaking.

Mr. Domínguez: I wish to express to the board that the Chamber of Commerce of Porto Rico is willing and ready to coöperate in every way possible in order to prevent any injury to the fruit industry of Porto Rico and to help the United States to remain clean from any of these pests being imported here, and in that line we will be willing to do anything and to bear any part of the burden that is necessary, either financially or collectively or individually, in order to help obtain this result. It seems to be an established fact before the board from what the gentlemen preceding me stated that these insects do not exist in Porto Rico. Therefore, as a consequence of that, it would be quite unnecessary for the board to take any measure that would impair or affect in any way the free shipment from Porto Rico, and taking for granted the fact that these pests do not exist in Porto Rico, it occurs to me the way in which most efficiently the board could prevent the introduction of these pests into the United States would be by coöperating with the Insular authorities and the Experiment Stations in Porto Rico in order to keep them away from Porto Rico. We are willing and ready to obligate any sums of money necessary to coöperate with that work, not only the officials of Porto Rico but the people of

Porto Rico and the Chamber of Commerce is willing to coöperate in any way possible. But having a Federal Experiment Station in Porto Rico it seems to me that the suggestion of Prof. Whetzel that this board should have some agent in the Island to coöperate with the Insular authorities could be very well harmonized with the existence of this Federal Experiment Station by having the Federal Experiment Station make reports to the board as to the existence or non-existence of any pests, and having the board communicate freely with the Commissioner of Porto Rico in order to keep close watch as to whether these insects will develop in the future and by strengthening our quarantines there, which may be done as often as the board thinks necessary, we will be fully protected and no measure to restrict the free movement of fruits from Porto Rico to the United States will be necessary.

MR. SCOVILLE: In conclusion I would say that the suggestion of an inspector in Porto Rico would meet with the hearty approval of the fruit interests in Porto Rico where he would do a double service. He would protect the mainland and us.

In regard to that matter of a fear of the permit system, we, of course, in shipping a large quantity of fruit in ships from Porto Rico to New York, have to finance ourselves as other people do in other parts of the world. It is also natural that if we are entering our goods only under a permit system it is not going to strengthen our credit in banking circles in the way of obtaining funds because if our products might be condemned at the dock after their arrival in New York then it is a matter which would have material influence upon our financial arrangements in the north and in Porto Rico, and that would be a very strong thing we think in favor of an inspection at the Island ports in case you should consider an inspection necessary at all.

I am going to leave with you a little written statement of our position on the matter. To that I have attached a report of Mr. Tower who was Entomologist for some seventeen or eighteen years and whose knowledge of the insect pests of Porto Rico is perhaps greater than any other person's. (This written statement contains the gist of Mr. Scoville's remarks and has been filed with the board.)

We are convinced from Mr. Tower's report and all of these other reports that we have not any of the more dangerous insect pests, and we are inclined to the belief that except for that possibility the board would not be considering further restrictions except on fruits or plants that are known pest carriers. We have no objection to the exclusion under embargo of such fruits and plants. We believe,

however, that our principal products — pineapples, grapefruit, oranges and tangerines—should be allowed to come in free of any permit system. That the permit system be put into effect, however, in so far as fruits and vegetables and other products are concerned that may be suspicious. In other words, as to which the board has any real fear of being carriers of pests that might be dangerous to the agriculture of the rest of the country.

And before closing, you have heard from a great many others here who have appeared as our friends in this matter. I am the only one who is a real farmer who has done any talking but before closing I want to have Mr. Landrón, who is a fair sample of what our native farmer is doing in Porto Rico, who is educating his sons at Cornell and Syracuse to be scientific farmers—I believe he ought to say a word to the Board.

MR. LANDRÓN: I want to lay stress on the importance for the Porto Rican farmers to have any inspection that is to be done be done in the Island of Porto Rico and not here. The majority of the farmers live in the mountains and they are just preparing to go into the vegetable and fruit-growing industry. The Government of Porto Rico has spent millions of dollars in building roads over the Islands. The Federal Land Bank and the Intermediate Loan Banks are financing the farmers over there. We have the soil. We have the roads. We have the financial aid, and now we have the market, but the Porto Rican farmers would be very suspicious and would not feel very inclined to go into business in that line if they fear that at any time the fruits and vegetables will be thrown into the waters of New York harbor. I might tell you the whole future of Porto Rico depends on this very issue. We can not rely very much on the cane growing. It is so valuable it is in the hands of the wealthy corporations and individuals. We have to depend in the future almost exclusively on fruit and vegetable growing. In behalf of the farmers of Porto Rico I request you to go very slowly in this matter. Take our future into consideration. Look at it from the humane standpoint, and if you can do us the favor of having your work done on the Island, which is very proper since we are part of the United States, I think you will serve Porto Rico. I thank you.

MR. SCOVILLE: There is one point in that connection. In pineapples our only competitor is the Cuban pineapple. Most of them come in by railroad car and get reasonably quick distribution. Ours all come in by ship to New York and as a matter of fact, from all the discussion everywhere, it would seem that the pineapple seems to

be reasonably free from any pest. Even the Mediterranean fruit fly in Hawaii does not seem to attack the pineapple but it might possibly get into a shipment. So it would seem to us that that matter of inspection in Porto Rico is well worth serious consideration.

DR. CHARDÓN: The only point we haven't touched on at this hearing is the matter of the importation of sugar cane from Santo Domingo into Porto Rico. The South Porto Rico Sugar Company has been given a permit to import from Santo Domingo about 1,000 tons of cane. The importation is regulated by the plant quarantine service of the Insular Government. You will realize that there lies a big chance for the introduction into Porto Rico of insects that occur in Santo Domingo. Since this is a very important point, I ordered the Pathologist of the Insular Experiment Station, Dr. Cook and Dr. Catoni to go to Santo Domingo and report on the fumigation of these cargoes of cane coming into Porto Rico, and I have here a complete report of their findings and they state in conclusion that the fumigation appears to be well done and to be efficient in every way. (This report is attached as Appendix D.)

Now, Mr. Chairman, we think we have covered the two main issues brought before the consideration of the board. In the first place, the matter of the West Indian fruit fly. I think we have proven to your satisfaction that it is an insect which occurs in Porto Rico but has never been reported on citrus fruits nor pineapples. I think we have proven to your satisfaction that there is no chance of importing that into the United States. By the character and spirit of the Department of Agriculture and the Legislature of Porto Rico about our work, I think we have proven to you that we are doing the very best in every way to protect our farmers from this pest which might be injurious to their crops. Since we have a very important appointment, Mr. Chairman, I think we will have to leave or you will have to close the meeting.

MR. NEAGLE: I am appearing for the South Porto Rico Sugar Company which is the importer into Porto Rico from Santo Domingo of sugar cane. I have not seen the report which Dr. Cook prepared and Dr. Chardón presented, but in that connection and not knowing what the report says, I would like to point out to the board that cane has been imported now for thirteen years. Every particle is fumigated. Prior to the war the cane was brought in only under deck but during the war on account of the shortage of shipping a large part of the cargo was carried on deck under tarpaulins. It is under fumigation constantly from the time it leaves Romana until it arrives in Porto Rico and during that thirteen years the fumigation

has been so perfect that there is today—I think Dr. Cook's report will bear me out—no evidence anywhere of the butterfly moth which is the cane parasite in Santo Domingo. The South Porto Rico Sugar Company is importing some 200,000 tons of cane a year which produces for the Insular Government a revenue of $200,000 because the duty on cane is $1 a ton. I have also afforded opportunity to the Federal and Insular inspectors to inspect either at Romana or Porto Rico the entire scope of the handling, shipping and handling again in Porto Rico of this sane and within one mile of Ensenada where the cane is brought in there is any amount of vegetation which would be subject to the ravages of the butterfly moth if it were brought in, but to date there is no evidence whatsoever of the entry of that pest and then, Mr. Chairman, this does not affect the South Porto Rico Sugar Company, but it does affect Porto Rico. It seems to me that the whole problem that is here is an economic problem solely. All questions of plant entomology and pathology are economic. These pests are not disease carriers. It being wholly an economic matter, then every consideration of economics, seems to me, requires that if possible, the inspection be made in Porto Rico because the fruit if brought from Porto Rico and then dumped in New York is a total loss, whereas if the fruit had some of these pests and was inspected at Porto Rico and the presence of the pest was determined, some other use of the fruit might be made. It might be canned or made into marmalade.

Mr. Wilson: I represent Mr. T. P. Lippitt, one of the largest and oldest fruit shippers in Porto Rico. The facts of my case, however, I have gained since I have been here. In listening to the statements of officers of the Government and shippers and fruit growers, I must say that I do not think that the Department of Agriculture, or whatever source it was that brought this matter to your attention, has made up a *prima facie* case. I do not wish to speak technically, but from all I have heard, there is not in Porto Rico any pest that is liable to become a danger to the United States in the shipment of citrus fruit or pineapples, and, therefore, it seems to me that the suggestion that has already been made that, if possible, it would be much more practical, instead of having an inspection order issued against products from Porto Rico, to have issued an order protecting products coming into Porto Rico, from the source of this possible danger in the fruit. In other words, I think the Government or the Department of Agriculture not having made out its *prima facie* case of the necessity of an inspection order, such an order should not be issued against Porto Rico, because it is a

question as to whether if that inspection order is put into effect, how it will be enforced, and how rapidly the ships will be inspected. I have no doubt that they inspect as rapidly as the force at their disposal will permit, but the question is, is it right, when no good reason is presented, that they should be put into the inspection class with all the resulting inconveniences and some harm which have been pointed out by Mr. Scoville and the other practical fruit growers.

(At this juncture, 12:20 p. m., as a good many had already left the room and as all the others were getting ready to leave, the Chairman announced the meeting adjourned.)

Appendix A

REPORT ON INSPECTION OF CITRUS PLANTATIONS IN WESTERN PORTO RICO, FEBRUARY 19–21, INCLUSIVE

The present conditions are extremely favorable for the infestation of citrus fruits by the West Indian Fruit Fly (*Anastrepha fraterculus*), since neither jobos (*Spondias Mombin L.*), mangos nor guavas are at present in season; in all of the area inspected the sweet orange, the sour orange and the grapefruit were the only fruits noticed in which the said pest could breed.

The first inspection was made at kilometer 7.2 on the north road from Mayagüez to Maricao. Here a large coffee plantation with hundreds of semi-cultivated sweet-orange trees scattered about among the coffee, was carefully inspected. Many ripe and rotting fruits were noted on the ground under the trees and while some of these fruits did have the usual fauna of insects which normally attack such rotting fruits, no trace whatever was found of any larva, pupa, or imago, of the West Indian fruit fly.

The second inspection was made at Hacienda Camila at kilometer 7.7. Results the same as at the previous *finca*. The *mayordomo* stated that they had considerable trouble with the birds making holes in the rind of the ripe oranged but he had never noticed any *gusanos* in any of these wounds.

The third inspection was made in the vicinity of kilometer 8.5 and particular attention was paid to the packing house and orange orchards of Sr. Pedro Pérez. Several thousand fruits were examined here in all conditions: on the tree, in the picking baskets, in barrels, on the ground, in boxes (between the orchard and packing house) and in the packing house. No trace of any fruit fly in any stage was found and, according to the orange pickers and packers interviewed there, they had never seen a white maggot in any kind of orange, although birds and *mariposas* were believed to do considerable damage especially to isolated trees on the hill tops. (On account of the extremely low price offered by the shippers in Mayagüez—$1 per box wrapped and delivered to the Playa de Mayagüez—only the best of the "wild" fruits were being used—leaving some 30 or 40 per cent of the fruits in the field.) Photos were taken here of fruit piles on the ground and of decaying fruits on trees 45 feet high, and probably 75 years old.

At kilometer 17 another packing house was inspected and hundreds of fruits were carefully examined near the building (in heaps thrown out from the packing house). The proprietor of this establishment stated that he had been packing oranges at the same place for 23 years and for several years he had been inspecting every lot of oranges which *might* carry some insect pest because he had heard that in other countries there were pests which attacked these fruits. Thus far, he has never seen any *gusano* in either sweet or sour oranges in his neighborhood.

Three small groups of sweet-orange trees near Maricao on both the north and south roads, were inspected and at least 100 fruits were opened, with *negative* results.

At kilometer 10.2, on the south road between Mayagüez and Maricao a thorough inspection of ripe and rotting fruits was made with only negative results: near this point there were a few jobo and several mango trees but none of these had even immature fruits.

An orange-packing house at the Playa in Mayagüez was inspected. Several hundred boxes of too ripe fruits were in evidence here; no trace of fruit fly was found and only a very small per cent of fruits were discarded as unfit for shipping (largely on account of over-ripeness). The price paid for first-class oranges brought to the said plant runs around $1, instead of 35 to 60 cents as is *commonly* paid.

A careful inspection was made of the grape-fruit plantation in the Añasco valley belonging to Mr. Mateo Fajardo; this plantation has been in full bearing for three or four years and covers some twelve or fifteen acres; the trees are in excellent condition and the fruits are in fair crop; apparently only a small part of the crop has been picked as indicated by the heaps of waste fruits in the wind-break rows of mango trees and by the present heavy crop of over-ripe fruit on the branches; several hundred ripe and rotting fruits, many of which were bruised, scratched and more or less opened, were examined. Comparatively few insects of any family were in evidence about these rotting fruits. One fact which may explain this is the abundance of lizards which station themselves on these heaps of waste fruit, devouring a very large percentage of the flies attracted to the fruits.

Samples of suspicious fruits were brought to the office from the grape-fruit plantation, from Camila estate and the estate of Mr. Pedro Pérez. These are under observation in this office.

(Sgd.) O. W. Barrett,
Agricultural Advisor.

Appendix B

GOVERNMENT OF PORTO RICO
DEPARTMENT OF AGRICULTURE AND LABOR
INSULAR EXPERIMENT STATION
Río Piedras, P. R.

February 25, 1925.

SR. F. LÓPEZ DOMÍNGUEZ,
Director Interino,
Estación Experimental Insular.

DEAR SIR:

In accordance with instructions from Commissioner of Agriculture Chardón and yourself, I last week devoted several hours each day to an inspection of grape-fruit plantations in the districts of Pueblo Viejo, Guaynabo, Sabana Llana, y Trujillo Alto, in search of any possible evidences of attacks from West Indian fly, *Anastrepha fraterculus* upon this fruit.

Although naturally I have not had sufficient time for a thorough examination I can assure you that my inspections have been considerably more than casual. Besides actual inspection of groves and falling fruit I arranged with a number of picking foremen to carefully watch for any signs of bored fruit, and also arranged that special attention be given to fallen fruit such as might be sent to the canners as it is precisely in such fruit that emergence holes of this insect would be most likely found. As an additional precaution I offered some boys in the various groves a dollar each for any fruit they might bring to me containing a larva. The fact that during the entire two weeks this offer was open not a single fruit was tendered is a very strong indication that there is no infested fruit in this section.

Summing up, I beg to inform you that in the inspections made in the above-mentioned districts I have been unable to find the slightest evidences that the West Indian fruit fly is attacking citrus fruits.

Respectfully submitted,

ARTHUR H. ROSENFELD,
Tecnólogo Especial para Caña.

Appendix C

GOVERNMENT OF PORTO RICO
DEPARTMENT OF AGRICULTURE AND LABOR
INSULAR EXPERIMENT STATION
Río Piedras, P. R.

March 2, 1925.

MR. F. LÓPEZ DOMÍNGUEZ, *Acting Director,*
Insular Experiment Station,
Río Piedras, P. R.

DEAR MR. LÓPEZ:

I am hereby submitting my report of general citrus conditions over the commercial grape-fruit section of the Island.

Since taking up the work of Entomologist for the Station I have been making a survey of citrus conditions over the Island and making as complete a study as possible of the insects attacking citrus as my time would permit. Coöperating with the Department of Plant Pathology experimental spray plots have been laid out on a number of citrus properties with a view to determining satisfactorily whether it is advisable to spray under present conditions, the proper time for application, cost of materials, etc. In this work I have had the opportunity to visit many of the citrus sections of the Island and have found them remarkably free of injurious insect pests. I have found no trace of the black fly of citrus (*Aleurocanthus woglumi*), the Florida citrus white fly (*Dialeurodes citri*), nor of either of the two fruit flies known to attack citrus (the Mediterranean and Morelos or Mexican orange fly).

A special trip of inspection of packing houses and groves in the Vega Baja, Manatí, and Barceloneta sections was made February 20th to determine if possible whether or not the West Indian fruit fly (*Anastrepha fratercula*) could be found attacking citrus. Among the properties inspected on this trip was the packing house and grove of Castillo Scoville, four kilometers from Vega Baja, the packing house and grove of E. A. Bailey, four kilometers from Vega Baja, the groves of Adolfo Eguen, four and a half kilometers from Barceloneta, the grove of Abraham Sebrino, three kilometers from Vega Baja, the Day Plantation groves, Ellsworth, manager, near Manatí and others. These properties were representative of the others of this section and nowhere could any signs be found either in packing house or in grove of any fruit that was even suspicious although the dropped fruit beneath trees was very carefully examined. Many trips have been made through the Bayamón and Vega Alta sections with similar results.

On a whole the Entomologist has found the groves of citrus in Porto Rico to be remarkably free of serious insect pests and the packing houses are run in a very efficient and modern way with modern equipment.

Respectfully,

(Sgd.) DR. H. L. DOZIER,
Chief Entomologist.

Appendix D

GOVERNMENT OF PORTO RICO
DEPARTMENT OF AGRICULTURE AND LABOR
INSULAR EXPERIMENT STATION
Río Piedras, P. R.

March 8th, 1925.

HON. CARLOS E. CHARDÓN,
Commissioner of Agriculture and Labor,
San Juan, Porto Rico.

DEAR SIR:

In accordance with your orders of February 27th, 1925, we, the undersigned proceeded to Romana, Santo Domingo on March 2nd, arriving on the morning of the 3rd. The management of Central Romana, Inc., requested us to extend the length of our stay so that we might visit all parts of the 35,000 acres of cane plantation and also see something of the sugar industry of the surrounding country. Since the South Porto Rico Sugar Company had very kindly furnished us with free steamer transportation to and from Santo Domingo and since the Central Romana, Inc., entertained us as guests at the Company Club House and furnished us with free transportation from Romana to Santo Domingo City and return, we considered that we were under some obligation to comply with their request and, therefore, did not leave Romana for the return to Porto Rico until the evening of the 6th. A separate full report of our observations on the Central Romana, Inc., plantation and on the surrounding country and between Romana and Santo Domingo city and of the agriculture will be furnished to you. This report applies especially to the fumigation of the cane in route from Romana to Ensenada, which was the primary object of our visit.

We did not find any injurious insects or diseases of the sugar cane in Santo Domingo other than those already known to exist in Porto Rico, except the sugar-cane skipper (*Calisto pulchella*). The larva of this insect is a leaf feeder and there was an abundance of evidence of its work in the cane fields everywhere. We were told that it begins work in November and disappears in March and that it is much more abundant some years than others. No one appeared to consider it of importance but we would advise every reasonable precaution to prevent its introduction into Porto Rico. Under somewhat different conditions than those of Santo Domingo it is possible that it might develop into a pest of major importance. Since the insect is a leaf feeder the removal of the leaves removes most of the larva.

The cane is carried in two steamers during night voyages. One steamer being loaded during the day at Romana while the other is being unloaded at Ensenada. Each steamer carries a man whose special duty is the fumigation of the cane. The load of cane varies somewhat, the average being about 1,400 tons. The cane is loaded into the hatches and when it is possible to do so the hatches are closed and covered with tarpaulins which are carefully battened down. In case the load is large enough to project above the hatches, it is covered with tarpaulins which

are carefully battened down. The fumigation is with sulphur used at the rate of one-half pound for each ton and for eight hours. Three sulphur containers are placed in each compartment, the sulphur wet with alcohol and ignited. When the hatches are opened on arrival at Ensenada, a cloud of sulphur fumes arises and the odor is very pronounced. Although the odor of sulphur is noticeable during the voyage it is evidently well confined to the compartments. We were told that during windy weather the odor is more perceptible. We examined some of the fumigated cane but could not find any evidence of living insects. We were told that dead rats were frequently found in the vessel; these animals having been brought on board in the cane were killed by the sulphur fumes. *The fumigation appears to be well done and to be efficient in every way.*

We left Río Piedras March 2nd, 9 a. m.; returned to Río Piedras March 7th, 7 p. m.

Respectfully submitted,

(Sgd.) LUIS A. CATONI,
Chief Quarantine Inspector.

(Sgd.) MEL. T. COOK,
Chief Plant Pathologist.

Appendix E

Letters in connection with this hearing were received from the following firms and individuals:

Livart Fruit Distributors, Inc., 213 West St., New York, N. Y.
Congressman Milton W. Shreve, transmitting letter signed by several of his constituents.
Rounds, Hatch, Dillingham & Mead, 62 Cedar St., New York, N. Y.
Mando Trading Co., 110 West 143d St., New York, N. Y.
Hon. Félix Córdova Dávila, Resident Commissioner from Porto Rico.
Mr. Joseph Alcántara, 142 East 83d St., New York, N. Y.
Hon. J. W. Weeks, Secretary of War.
Mr. O. P. Townshend, Assistant to Chief of Bureau of Insular Affairs, War Department.
Growers & Shippers League of Florida, Orlando, Fla.

A telephone message was also received from Hon. T. W. Phillips, Jr., 413 House Office Building, Washington, D. C., while Mr. John L. Peters of the Porto Rico Fruit Exchange, 204 Franklin St., New York, N. Y., called in person.

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